

## UNITED STATES PATENT AND TRADEMARK OFFICE

	INITED STATES DEPARTMENT OF CO		R
ι	Inited States Patent and Trademark Of address: COMMISSIONER FOR PATENTS	Fice	1
Α	ddress: COMMISSIONER FOR PATENTS		/
	D.O. D 1460		

P.O. Box 1450 Alexandria, Virginia 22313-1450

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CON IRMATION 10/630,201 07/30/2003 P/2528-11 Sandra Ranaldo EXAMINER 2352 07/27/2004 OSTROLENK FABER GERB & SOFFEN GIMIE, MAHMOUD 1180 AVENUE OF THE AMERICAS ART UNIT PAPER NUMBER NEW YORK, NY 100368403

3747
DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)			
Office Action Comments	10/630,201	RANALDO ET AL.			
Office Action Summary	Examiner	Art Unit			
	Mahmoud Gimie	3747			
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet w	th the correspondence address			
A SHORTENED STATUTORY PERIOD FOR REPL' THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period of the period for reply within the set or extended period for reply will, by statute any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a r y within the statutory minimum of thir will apply and will expire SIX (6) MON , cause the application to become Ab	eply be timely filed y (30) days will be considered timely. THS from the mailing date of this communication. ANDONED (35 U.S.C. § 133).			
Status					
1) Responsive to communication(s) filed on 30 Ju	Responsive to communication(s) filed on 30 July 2003.				
2a)☐ This action is <b>FINAL</b> . 2b)☒ This	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.				
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims					
<ul> <li>4) ☐ Claim(s) 1-8 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdrawn from consideration.</li> <li>5) ☐ Claim(s) is/are allowed.</li> <li>6) ☐ Claim(s) 1-8 is/are rejected.</li> <li>7) ☐ Claim(s) is/are objected to.</li> <li>8) ☐ Claim(s) are subject to restriction and/or election requirement.</li> </ul>					
Application Papers					
9) The specification is objected to by the Examiner.					
10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.					
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).					
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.					
Priority under 35 U.S.C. § 119					
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.					
Attachment(s)	<b>,</b> □	(0.70, 440)			
Notice of References Cited (PTO-892)     Notice of Draftsperson's Patent Drawing Review (PTO-948)		Gummary (PTO-413) s)/Mail Date			
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7/25/04.		nformal Patent Application (PTO-152)			

Application/Control Number: 10/630,201

Art Unit: 3747

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 2. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Tokuo et al (6,701,898).

Tokuo discloses a fuel injection system of the common rail type comprising a plurality of injectors (54), a common channel (53) that supplies the fuel under pressure to the injectors (54), a high-pressure pump (1), which supplies fuel to the common channel (53) and is provided with a device (suction valve) for regulating the flow rate and a control unit (57) capable of keeping the pressure of the fuel within the common channel (53) moment by moment, equal to a desired value that generally varies over time; the control unit (53) being coupled to the regulation device (suction valve) in order to control the flow rate of the high- pressure pump (1) so as to supply the common channel (53), moment by moment, with the amount of fuel required in order to have the desired value for pressure inside said common channel (53); the control unit (57) comprising a sensor (56) that is capable of recording the value for the pressure of the fuel inside the common channel (53), and is capable of regulating the flow rate of the high-pressure

Application/Control Number: 10/630,201

Art Unit: 3747

pump (1) by means of a feedback control using as a feedback variable the value for the pressure of the fuel inside the common channel (53); the high-pressure pump (1) comprising at least one cylinder provided with a piston (2) having an alternating motion inside the cylinder, an intake channel (91), a discharge channel (11) connected to the common channel (53), an intake valve (suction valve) coupled to the intake channel (9,10) and capable of allowing a flow of fuel to pass into the cylinder, and a singledirection delivery valve (6) coupled to the discharge channel (11) and capable of allowing a flow of fuel only out of the cylinder (12), the regulation device (suction valve) being coupled to the intake valve (9,10) in order to keep the intake valve open when the piston (2) is in a compression phase and therefore to allow fuel to flow back out of the cylinder through the intake channel, the intake valve comprising a valve body (5) moveable along the intake channel and a valve seat that is capable of being acted upon in a fluid-tight manner by the valve body and is arranged at the end of the intake channel opposite the end communicating with the cylinder: the regulation device comprising a control member (91) that is coupled to the valve body (5) and is moveable between a passive position, in which it allows the valve body (91) to act in a fluid-tight manner upon the valve seat, and an active position, in which it does not allow the valve body (5) to act in a fluid-tight manner upon the valve seat, the regulation device (suction valve) comprising an electromagnetic actuator that is coupled the control member (91) in order to move said control member (91) between the passive position and the active position; the system being characterized by the fact that the

Application/Control Number: 10/630,201

Art Unit: 3747

electromagnetic actuator is driven by means of a pulse of current of short and constant

Page 4

duration.

With regard to claims 2-8, see above and figures 1-6.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The cited references show common rail systems.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Mahmoud Gimie whose telephone number is 703-305-1037. The examiner can normally

be reached on Tuesday-Friday between 7 a.m. -3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Henry Yuen can be reached on 703-308-1946. The fax phone number for the organization where this

application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free).

MG

MAHMOUD GIMIE PRIMARY PATENT EXAMINER ART UNIT 3747